

MONTHLY WEATHER REVIEW,

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WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In compiling the present Review, the usual data have been made use of. The most noticeable features of the month are; the hurricane of the 17th to 23rd; lower temperatures in the districts east of the Rocky Mountains; large excess of rain-fall in some districts and large deficiencies in others; low water in the rivers.

BAROMETRIC PRESSURE.

In General.—The general distribution of the atmospheric pressure is represented upon chart No. II. The highest reading for the month, 30.64 in., occurred at Yankton, night of the 14th, during the advance of high pressure No. IV; lowest, 28.73 in., at Key West, evening of 19th, while the hurricane was passing over. The pressure averages lower in all the districts than for October, 1873, 1874 and 1875.

Ranges in Barometer.—San Diego, .29 in.; Portland, Or., 1.01; Rocky Mountain stations, .48 to .64; plains of Kansas and Nebraska, 1.15 to 1.23; Missouri valley, 1.31 to 1.59; Red River of the North valley, 1.51 to 1.66; Upper Mississippi valley, 1.08 to 1.43; Upper Lake region, .99 to 1.47; Lower Lake region, .91 to 1.09; Ohio valley and Tennessee, .79 to 1.02; New England, .87 to .96; Middle Atlantic States, .80 to .91; South Atlantic States, .72 to .90; Key West, 1.24; Gulf States, .63 to .77; northern Texas and Indian Territory, .84 to 1.06.

Areas of High Pressure.—Of these, eight are described below. They have generally appeared in the Upper Missouri valley, from whence their movements have been south and eastward across the country. Their advance has been frequently marked by high northerly winds and gales, especially when preceded by decided low-pressure areas, in the more northern districts and on the Texas coast. As in the case of the storm of the 14th and 15th, when rainy weather has preceded them, the fall in the temperature has been sufficient to turn the rain into sleet and snow, while frequent and heavy frosts have been produced.

No. I.—In the September Review this high-pressure area is described as No. VI. At 7:35 a. m., (Washington time,) of the 1st, the highest, above 30.40 in., was central in Texas, with diminishing northerly winds on that coast, and minimum temperatures of 22° at Breckenridge and Dodge City, 36° at Knoxville and 41° at Corsicana. Frosts occurred as far southward as Indian Ter., northern La., Ga. and Va., and western Pa., with ice in Kan. and Tenn. On the morning of the 2nd it was central in the Western Gulf States, with minimum temperatures slightly above 40° over the interior of the Gulf and South Atlantic States, heavy frosts to the interior of the Gulf and Atlantic States, and ice in northern Ga. and S. C. By morning of the 3rd, the highest, about 30.17, was in the Eastern Gulf States. In northern New Eng., and from central Fla. northward over eastern Ky. and the interior of the South Atl. and Mid. States, the minimum was below 40°, with frequent frosts. During the 3rd and 4th it was gradually dissipated under the influence of low pressure No. I. On the morning of the latter, the area in which the minimum fell below 40°, extended from Wyoming and Nebraska to the Upper Lakes. Frosts were occasionally reported from Ga. and North Car. to New York, and from Ohio to Neb. On the 5th, frosts occurred from Kan. to Ind. and northward, and the area of freezing temperature was confined to northern Mich., Wis., Minn. and eastern Dakota.

No. II.—Following low pressure No. II, it was felt in the Mo. valley on the 5th. The temperature fell below freezing during the night in Wyoming and northern Dakota. At 7:35 a. m., of the 7th, it was central in Mo. and Ark. The minimum fell below 40° in Kan., Mo., western Ky. and Ohio, with frosts as far south as Kan., Mo., Tenn., West Virg., Md. and Conn., and occasionally ice from Kan. to Ky. On the morning of the 8th, the highest, 30.30, was near and northwest of Memphis, its progress eastward having been checked by low pressures No. III to the north of it and No. IV in the Eastern Gulf. The frost-area reached Neb., Ia., Tenn. and Virg. At 7:35 a. m., of the 9th, isobar 30.30 enclosed the country from Ky. and the Ohio valley to New Jersey. Freezing temperatures were reported from Minn. and the Lakes to the interior of the Mid. and Eastern States, and frosts from Kan., Mo., Tenn., Mid. States and New Eng. northward. During the 9th and 10th it lost its distinctive features, due to low pressures No. IV and V. On the latter morning, an area, in which the minimum was below 40°, reached from Tenn. to New Eng., Nova Scotia and New Brunswick, with reports of frost from Tenn. and Virg., north and northeastward. The Signals ordered the 6th, on the Texas coast, for a "norther," were not justified.

No. III.—During the 9th it advanced southeastward over the Northwest, following low pressure No. V. On the morning of the 10th the highest, above 30.20, was in Dakota and Neb., and the temperature fell below freezing from Wyoming to Wis., with a minimum of 19° at Breckenridge. By 7:35 a. m., of the